



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,628	01/22/2007	Jean-Marie Basset	P08765US00/BAS	4254
881 7590 03/29/2010 STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314				
EXAMINER				
LE, HOA T				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
03/29/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,628

Applicant(s)

BASSET ET AL.

Examiner

H. (Holly) T. Le

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections/Response to Arguments

2. **Claims 1, 2, 4, 5, 8, 9, 16-19, 22, 24, 25, 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Vidal et al (US 6,229,060) as set forth in the last office action and further discussed below.**

Applicant argued that Vidal does not teach a support of alumina. This is incorrect. Although silica is used in the examples, alumina is disclosed as the "preferred" oxide support". See col. 3, line 65 to col. 4, line 2. Just because examples do not use the materials disclosed elsewhere in the specification does not mean that such materials are precluded from the invention.

Applicant further argued the "surprising and unexpected advantages" over other compounds that include supports other than alumina. This argument is irrelevant because the rejection is an anticipation rejection, not obviousness rejection.

Claims 8 & 9: The alumina without mentioning porosity is inherently non-porous.

Without any modification, alumina is predominantly α -alumina.

Claim 16: The oxidation state of the metal, namely tungsten, is 5 or 6 (col. 2, lines 45-47 and 53-54).

Claims 17-18: The hydrocarbon residues include saturated and unsaturated hydrocarbons. See col. 2, lines 48-52. Note also that claim 17 recites the hydrocarbon

residues as optional, thus the hydrocarbon residues as specified in 18 are considered optional and not a positive limitation.

Claim 19: The tungsten atom is complexed by one or more hydrocarbon ligands (col. 2, lines 55-60).

Claim 22: Vidal'060 teaches a method for production of tungsten hydride grafted on a solid oxide support wherein the oxide preferably comprises tungsten (col. 2, lines 12-17 and col. 4, lines 1-2). The process comprises a dispersion and grafting step of an organometallic tungsten precursor on to a support based on alumina to form hydrocarbon compound (col. 2, lines 62-65 and col. 4, lines 1-2); and a hydrogenolysis step of the grafted compound (col. 3, lines 27-30).

Claim 24: Sublimation or solution is disclosed at col. 3, lines 10-12.

Claim 25: Col. 3, lines 28-32.

Claims 28-29 & 32: Col. 4, lines 7-40.

3. Claims 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vidal et al (US 6,229,060) in view of either Vanoppen (US 7220,888) or Basset (US 6,469,225) as set forth in the last office action and further discussed below.

Applicant contended that neither Vanoppen nor Basset cures the "deficiencies" of Vidal for failing to teach a support of alumina. Contrary to Applicant's contention, although silica is used in the examples, alumina is disclosed as the "preferred" oxide support". See Vidal, col. 3, line 65 to col. 4, line 2. Just because examples do not use

the materials disclosed elsewhere in the specification does not mean that such materials are precluded from the invention.

Applicant further argued the "surprising and unexpected advantages" over other compounds that include supports other than alumina. This argument is irrelevant because Vanoppen or Basset was applied not to show the obviousness of using alumina support, but rather to show the obviousness of using modified carbon skeleton and the use of catalyst in a method of making alkanes based on the compound comprising tungsten hydride grafted on an alumina support taught by Vidal.

Claim Rejections - New Ground

4. Claims 3, 5, 6, 7, 9-15, 20, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vidal et al (US 6,229,060) in view of Pollitzer et al (US 4,085,067).

Claims 3, 5, 7 and 9: Vidal teaches a compound for hydrocarbon metathesis comprising tungsten grafted on an alumina support as set forth in the last office action and discussed above. However, Vidal does not report the specific physical properties of the alumina support. Pollitzer discloses that porous alumina provides the best support for hydrocarbon metathesis. See Pollitzer, col. 4, lines 57-60. The alumina support is reported to have a specific surface area of 100 to 500 m²/g (Pollitzer, col. 5, line 4).

Claim 6: The most preferred alumina is γ -alumina or δ -alumina (Pollitzer, col. 4, lines 60-63).

Claim 10: Crystalline alumina is disclosed by Pollitzer at col. 4, lines 60-63.

Claims 11-14: Mixed alumina, including other oxides such as silica, zirconia, magnesia., is taught by Pollitzer at col. 4, lines 63-68. The ingredient proportions would have been obvious by routine experimentation because it has been held that it is not inventive to discover the optimum or workable ranges of result- effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 15: Alumina support in particulate form is taught by Pollitzer at col. 5, lines 24-37.

Claims 20 & 21: The infrared absorbance and chemical shift value as claimed are expected because the same alumina support is used to graft tungsten hydride. It has been held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, claimed properties or functions are presumed to be inherent. See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Claim 23: The alumina support has been subjected to calcination prior to grafting (Pollitzer, col. 5, lines 13-16).

Double Patenting/New Ground

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-21 and 26-33 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 7,635,794 ("US'794"). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

Claims 1-9 of the US'794 describe a compound comprising a tungsten hydride grafted on an aluminum oxide described in instant claims 1, 2 and 16-19. The specific properties of the alumina support in the compound as described in instant claims 3-14 are disclosed in US'794 at col. 3, line 32 to col. 5, line 29. The particulate form of the compound and its specific properties as recited in instant claims 15 and 20-21 are disclosed in US'794 at col. 6, lines 30-37 and col. 8, lines 52-57.

Claims 1-26 of the US'794 describe the method as recited in instant claims 26-33; that is the method of using the compound described in instant claims 1-9 as catalyst in metathesis reaction.

7. Claims 1-21 and 26-33 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-26 of U.S. Patent No. 7,638,672 ("US'672"). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

Claims 1-7 of the US'672 describe a compound comprising a tungsten hydride grafted on an aluminum oxide described in instant claims 1, 2, 4, and 16-19. The specific properties of the alumina support in the compound as described in instant claims 3-14 are disclosed in US'672 at col. 2, line 66 to col. 3, line 54 and col. 4, line 59 to col. 5, line 46. The particulate form of the compound and its specific properties as recited in instant claims 15 and 20-21 are disclosed in US'672 at col. 5, line 64 to col. 6, line 4.

Claims 1-20 of the US'672 describe the method as recited in instant claims 26-33; that is the method of using the compound described in instant claims 1-9 as catalyst in metathesis reaction.

8. Other references are cited as art of interest.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. (Holly) T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 12:30 p.m. to 9:00 p.m. (EST), Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. (Holly) T. Le/
Primary Examiner, Art Unit 1794

March 25, 2010